

[illegible]

January 1996

GUIDELINES FOR REDUCING FERAL/STRAY CAT POPULATIONS  
ON MILITARY INSTALLATIONS IN THE UNITED STATES

TABLE OF CONTENTS

Acknowledgments .....	I
Disclaimer .....	ii
Forward .....	iii
Purpose.....	1
Reasons for Feral/Stray Cat Control .....	1
Responsibility for Feral Cat Control on Military Installations .....	2
Recommendations for a Long-Term Feral Cat Control Program .....	2
Feral Cat Reduction and Control.....	2
Installation Pet Health and Control .....	3
Food Source Reduction .....	3
Habitat Reduction.....	3
Animal Control Personnel .....	4
Veterinary Service .....	8
Education .....	8
Record Keeping .....	9
Methods of Feral Cat Removal .....	9
Live Trapping .....	9
Hand Catching.....	11
Repellents.....	11
Leghold and Conibear Traps and Snares .....	11
Shooting.....	11
Poisoning.....	12
Tranquilizer Dart Guns .....	12
Capture, Spay/Neuter and Release .....	12
Resourcefulness .....	12
Euthanasia .....	12
Animal Welfare .....	12

## APPENDICES AND FIGURES

Appendix A - Glossary .....	A-1
Appendix B - List of Animal Control Equipment Suppliers .....	B-1
Appendix C - HSUS General Statement Regarding Euthanasia Methods for Dogs and Cats.....	C-1

## **ACKNOWLEDGMENTS**

This Technical Information Memorandum (TIM) was prepared by Captain William J. Sames, IV, who wrote the first draft based on his experience at Fort Sam Houston, Texas. Reviews of the draft and comments were provided by: Mr. Wayne Fordham, COL Ruth Lynn Hooper, CPT James W. Jones, Mr. Dennis D. Kuhr, MAJ Zia A. Mehr, Mr. Martin Mendoza, Mr. Robert Wardwell, and MAJ Richard K. Whittle. LTC William Inskeep II, VC, consultant to the Army Surgeon General, circulated the draft among his veterinarian colleagues and provided many useful comments. We especially thank the staff of the Humane Society of the United States for their review and comments that infused the draft with a good humane perspective.

We also thank the Kness Manufacturing Company Inc., Tommahawk Live Trap Company, and Woodstream Corporation for providing drawings of live traps.

Dr. Richard G. Robbins and Dr. Peter J. Egan of DPMIAC/AFPMB provided the comprehensive editing and coordination of review comments, respectively. Finally we wish to thank the staff of DPMIAC who assisted in the printing, collating, and mailing of this TIM.

## **DISCLAIMER**

Mention of a specific product, trade name, or manufacturer does not constitute an official endorsement of these products, but are provided for illustration and information purposes only.

## **FOREWORD**

Feral/stray cat control can be a thankless undertaking but is a task that must be conducted when the situation arises. The goal of this TIM is to provide a number of possible approaches, point out issues to consider and outline the coordination necessary to guide decision makers in tailoring sound approaches to feral/stray cat management on military installation.

If readers have suggestions or corrections to improve any portion of this TIM, please address them to Editor TIM # 37, Guidelines for Feral/Stray Cat Control, Defense Pest Management Information Analysis Center, Forest Glen Section - WRAMC, Washington, DC 20307-5001, FAX (301) 295-7483 or phone (301) 295-7480 or DSN 295-7480.

## GUIDELINES FOR REDUCING FERAL/STRAY CAT POPULATIONS ON MILITARY INSTALLATIONS IN THE UNITED STATES

**PURPOSE:** To provide guidelines for the removal of feral/stray cat populations on military installations in the United States in order to prevent injury or disease to DoD personnel and pet animals kept on the installation, to provide for the welfare of feral/stray cats themselves and of wildlife on the installation, and to provide recommendations on how to develop a cat control program that obtains general public input and assistance.

### REASONS FOR FERAL/STRAY (henceforth referred to as feral) CAT CONTROL

1. Feral cats are animals that are no longer under human control, but live and reproduce in the wild, usually in close association with humans. Humans have neglected these animals, which live exposed to disease, hunger, weather and attack from dogs, humans or other cats and animals. Some of these cats may survive for several years before succumbing to starvation, disease, dogs, other animals or motor vehicles. Failure to prevent or control a feral cat population amounts to inhumane treatment of animals.
2. Feral cats can harbor and transmit a variety of fatal and non-fatal diseases to domestic cats and other pets. These diseases include rabies, plague, parasitic worms, external parasites such as fleas and mites, feline immunodeficiency virus (FIV), feline leukemia virus (FeLV), feline distemper or panleukopenia, feline infectious peritonitis (FIP), and various bacterial infections.
3. Feral cats can also harbor and transmit fatal and non-fatal diseases to humans. These include rabies, plague, ringworm, internal and external parasites, toxoplasmosis, bartonellosis (formerly known as cat scratch fever), allergies to cat hair, and secondary bacterial infections from cat scratches and bites.
4. Feral cats living in close association with humans can also damage buildings, contaminate food supplies, and kill birds and other wildlife. Parasites such as fleas are often a problem in areas inhabited by feral cats.

### RESPONSIBILITY FOR FERAL CAT CONTROL ON MILITARY INSTALLATIONS

1. The installation commander is responsible for the health and welfare of the human

population on an installation. Problems with animals on an installation may have an effect on personnel health, morale, and performance; therefore, the commander is responsible for animal health and welfare as well. Because feral cats adversely affect human and pet health and welfare, they must be controlled. If there is a need for feral cat control on a military installation, the feral cat control plan shall be described in the Installation's Pest Management Plan and approved by the Installation Commander.

2. Feral cat populations can also damage government property. It is the responsibility of the installation commander to ensure that an adequate animal control program is established and functioning in order to prevent or reduce potential problems.

3. Most installations have regulations that assign responsibility among various groups for animal control. The installation veterinary service, security personnel and facilities engineers may all have specific responsibilities relative to feral cat control. Individuals who participate in feral cat control programs must also receive professional training in humane control techniques.

4. Personnel who occupy family housing have a responsibility to practice good animal husbandry with their pets and to follow installation regulations concerning animal care and control. Personnel living off post should also follow these practices to assist animal control efforts in the surrounding community.

## RECOMMENDATIONS FOR A LONG-TERM FERAL CAT CONTROL PROGRAM

### 1. Feral Cat Reduction and Control

a. Installations with large feral cat populations must reduce the population by capture and removal.

(1) An initial feral cat reduction can be conducted over a period of time to help efficiently utilize limited animal control resources as well as allow more time for possible adoption of cats.

(2) Initial population reductions should last no longer than 30-90 days. Aggressive reduction programs over a short period of time prevent additional cat reproduction. Population control should be thoroughly monitored because cats have a high reproductive potential. Although an intensive population reduction program conducted over a few months may provide initial control, even a few missed cats may perpetuate the problem.

b. Continued weekly animal control efforts after the initial reduction will result in reduced captures in the future. In addition, smaller catches over a longer period of time may allow a higher proportion of the cats to be adopted.

2. Installation Pet Health and Control. The Humane Society of the United States (HSUS) believes strongly that responsible pet ownership demands that cats be kept indoors. If an

installation adopts this policy, then some of the points below become moot.

- a. Require routine vaccinations for rabies and other feline diseases.
- b. Require that cats wear a collar and tag when outside.
- c. Require that cats be neutered (cat breeders seeking exemption should submit a request for a waiver to the installation commander).
- d. Require that cats be fed indoors or that owners remove excess food immediately after feeding cats outdoors.
- e. Euthanize feral cats that are identified with incurable diseases.
- f. Educate cat owners during in- and out-processing briefs to leave unwanted animals with an animal welfare group or the installation veterinary service for possible adoption.

### 3. Food Source Reduction

- a. Prohibit the feeding of feral animals on the installation (includes "2.d." above).
- b. Require dumpsters and garbage cans to have tight fitting doors and/or lids that are kept closed when not in use. This is especially necessary in areas where scrap food is thrown away.

### 4. Habitat Reduction

- a. Eliminate feral cat harborage sites such as brush piles and junk piles.
- b. Eliminate feral cat access to buildings.
  - (1) Treat crawl spaces for ectoparasites (fleas, ticks, and mites).
  - (2) Remove cats from the structure.
  - (3) Seal openings to the structure to prevent attraction/entrance. If permanent repair is not immediately possible, seal openings with temporary materials.
  - (4) Check repairs and the condition of buildings.
    - (a) After initial repairs, check weekly for one month to prevent cats or people from reopening sealed areas.
    - (b) Check repairs and building conditions monthly for a few months after (a) above.
    - © Check building conditions quarterly thereafter.

- (d) Make immediate repairs to buildings as new damage or access holes are found.
- (e) Check undamaged or uninfested buildings on a periodic basis (quarterly, semiannually, or annually) to prevent infestation problems.
- (f) Ensure that permanent repairs are made in a timely manner.

## 5. Animal Control Personnel

a. Rabies Vaccination - All animal control personnel should receive the pre-exposure rabies vaccine before conducting animal control work. The pre-exposure regimen is a three immunization series given over a four week period. Occupational medicine personnel should ensure that individual titers remain high enough for protection. If someone is immunized with human diploid (pre-exposure) vaccine and an exposure occurs, an immediate booster should be given. If a non-immunized person is exposed, post-exposure treatment must include human rabies immunoglobulin.

### b. Personnel

(1) Some installations may have animal control personnel. Other installations employ security personnel and pest controllers in the animal control program.

(2) Generally, animal control needs to be available on a 24 hour basis. Ideally, installation security personnel are responsible for animal control operations and have a full-time employee assigned to animal control tasks. After duty hours, security personnel handle routine animal control tasks such as picking up stray animals. Feral cat reduction and control are handled by the animal controller. Duty hours for the animal controller should be flexible, since peak animal activity hours may be outside the normal workday.

(3) Responsibilities of different offices must be clearly defined. Some installations assign stray animal control to security personnel and wild animal (rodent, raccoon, squirrel, etc.) control to installation pest controllers. A breakdown in communication may occur with feral cat problems. Ensure that responsibility for each type of animal problem is clearly established in the installation pest management plan.

(4) Some installations may have all or part of the animal control operation under contract to a private organization. Ensure that the contractor is providing adequate control, including capture, removal, proper handling and disposition of feral cats, as well as repairs or reports of building damage.

(5) Assign repair responsibilities to the appropriate organization. Require animal control personnel to perform at least temporary exclusion repairs.



c. Equipment (see also Appendix A).

- (1) Live traps and bait
- (2) Animal handling gloves
- (3) Catch pole
- (4) Animal net
- (5) Flashlight
- (6) Truck
- (7) Method of communication with base operations
- (8) Safety goggles
- (9) First aid kit

d. Documentation. Document all animal control efforts, including the date, number, location and type of animal caught. Describe the background of the control effort, especially if the animal caused damage or if other people were involved. Document road killed and other pet fatalities. DD Form 1532-1, Pest Management Maintenance Record (Figure 1), should be used for this purpose. Forward forms to the Installation Pest Management Coordinator (IPMC) on a monthly basis for inclusion on DD Form 1532, Pest Management Report.

e. General Procedure. Animal control personnel catch/trap feral cats and take them to the installation veterinary service for disposition. Animal controllers should not kill any cats, unless this mechanism has been pre-approved by installation command authorities. Disposal of road kills and other animal carcasses should be accomplished in accordance with veterinary guidelines that must comply with local and state rules, such as those governing incineration,

Figure (1)

Figure (1) - continued

but the job of disposal is a facility engineer responsibility.

## 6. Veterinary Service

### a. Personnel

(1) The installation veterinary officer is responsible for care of abandoned animals and the final disposition of all captured feral cats.

(2) Veterinary support staff are necessary for care and maintenance of animals and animal holding facilities.

### b. Procedures

(1) The veterinary officer establishes procedures for handling cats. These usually involve:

(a) A three-day holding period for all unclaimed cats coming to the facility, followed by euthanasia or continued care for possible adoption.

(b) Adoption procedures for cats deemed adoptable by the veterinary officer.

© Procedures for reclaiming a stray cat or contacting a cat owner when a stray, tagged cat is picked up by animal controllers.

(d) Euthanasia procedures for feral or other unidentified or unclaimed cats.

(e) Procedures for disposing of cat carcasses found on the installation as well as those generated in the clinic.

(f) Lactating females trapped without their kittens should be released at the capture site. This may complicate future trap attempts, but it is the only humane option when nursing kittens are involved.

(2) The veterinary service documents final disposition of cats and relays information back to the animal controllers.

7. Education - To encourage compliance by persons not directly involved in animal care and control, a public education campaign should be conducted in advance of any major trapping program. Provide information about the hazards faced by feral cats and the importance of responsible pet ownership. Also, discuss the procedures involved in trapping or removing feral cats and the importance of spaying and neutering pets and keeping them indoors.

8. Record Keeping. If installation personnel express an interest in the fate of particular cats, have the following information available:

a. Sex and physical description of cat.

b. Location of capture.

c. Site where cat will be held.

d. Length of time cat is expected to be held.

e. Suitability of cat for adoption.

## METHODS OF FERAL CAT REMOVAL

## 1. Live Trapping.

a. Live trapping is an attractive option in that cats are not killed and injuries are minimized during the trapping process. Owned and identified cats can be returned to owners, and unclaimed healthy cats or kittens may be adopted after capture.

b. Trapping is very time consuming, and the initial outlay for adequate numbers of traps may be substantial. Moreover, traps may be vandalized (they may be damaged, sprung, or stolen and captured cats may be injured or released). If the cat population is large, some cats may become trap shy. Monitor traps every two hours, as a minimum. Monitoring lessens the risk that a cat will injure itself in a trap, reduces stress on trapped animals, and decreases the likelihood that other animals will be drawn to a sprung trap.

c. Many different models of humane live box traps for cats are commercially available. These vary in price, construction, and style. Some come with two entrance doors, others with only one. But the principle is basically the same: place a bait inside the trap and place the trap within the animal's domain (Figure 2). Some traps are designed so that only one door is open for trapping; a vertical sliding ("guillotine") door on the opposite end remains closed and latched and is used for removal of the trapped animal.

d. Certain practices may help increase trap catches:

- (1) Place the trap in an area where feral cats are frequently observed.
- (2) Place the trap parallel with and against the wall of a building.
- (3) Place the bait against the wall side of the trap on the bait pan.

Figure (2)

(4) Use two-door traps (if available) with both doors open.

(5) Use a variety of baits: cat food, sardines, liver, etc.

(6) Prevent human interference with traps by sealing entrances to buildings and then setting traps under or in the buildings to catch remaining cats.

(7) Wire trap doors open and prebait traps to gain the confidence of feral cats.

e. Covering the trap with a light cloth, either when setting the trap or immediately after the cat is caught, prevents the cat from seeing out and thereby helps to calm it down. This step can also prevent the types of injuries typically sustained by frightened animals, which often thrash around wildly in their attempts to escape.

2. Hand Catching - Nets, catch poles and net guns are effective for capturing semi-friendly or trap shy cats. Animal control personnel should have at least one net and catch pole on hand.

3. Repellents - Many chemicals are registered for repelling feral cats. These include: allyl isothiocyanate, alkyl pyridines, amyl acetate, blood, bone oil, citral, citronella oil, pyridine, capsaicin, cinnamaldehyde, citrus oil, cresylic acid, eucalyptus oil, geranium oil, isopropyl alcohol, lavender oil, lemon grass oil, menthol, methyl nonyl ketone, methyl salicylate, mustard oil, naphthalene, nicotine, paradichlorobenzene, pentanethiol, rue oil, thiram, thymol, tobacco dust, trichloroethane, and ziram. Repellents do not solve the feral cat problem because they fail to curb the reproduction of unsterilized cats or address the problem of free roaming animals, but they may be useful on a small scale to protect a specific area or item.

4. Leghold and Conibear Traps and Snares - The American Veterinary Medical Association has declared that these devices are inhumane. In addition, these traps may pose a danger to non-target animals and small children. Do not use these traps.

5. Shooting.

a. Shooting may be an option when other means are not available, or are ineffective, or in emergency disease situations (example: rabies outbreak) when human health is at great risk. However, there is a greater risk of exposure to zoonotic diseases from animal blood or other bodily fluids splattering on control personnel. Carefully weigh and examine all options before considering this method. Remember, **strict command approval must be obtained in advance and proper public affairs coordination must be effected.**

b. Safety is a major concern when shooting, and small caliber weapons are best in most situations. Pellet rifles are useful in urban areas; a .22 rifle, shotgun or larger caliber rifle may be appropriate for rural settings.

c. Animal controllers involved in shooting feral cats must (1) know and practice firearm safety rules, (2) demonstrate firearm proficiency, and (3) be mature enough to refrain from shooting a cat if the bullet has a high probability of passing through the cat and then damaging private or government property, injuring a human or other non-target animal. Only a few well-trained individuals should be involved in the actual shooting.

d. Use the shooting method only when and where there are no chances of injury to humans.

6. Poisoning - There are no poisons or fumigants registered by the Environmental Protection Agency for feral cat control. Do not use "home remedies"; all poisons are illegal and may cause injury or death to non-target animals.

7. Tranquilizer Dart Guns - Dart guns are likely to seriously injure animals as small as cats. Under conditions of absolute need, blow guns may reduce the likelihood of darting injury, but requesting Drug Enforcement Agency permits may make their use by nonveterinary personnel impractical. This option may be used to live capture elusive cats.

8. Capture, Spay/Neuter and Release - Cats captured with traps or dart guns may be spayed or neutered. After surgery the cats are released back into the environment. The spay/neuter

program is advocated by some as a method of feral cat control. The method is believed to maintain the dominance order in local populations and prevent population growth. However, the problem remains: animals continue to suffer (e.g., they may be hit by cars or harassed by children). The HSUS does not consider this method an acceptable alternative to humane capture, adoption and/or euthanasia of trapped cats.

9. Resourcefulness - If a cat becomes trap shy and difficult to catch, think of new ways to catch the animal.

10. Euthanasia - Procedures should be established in accordance with American Veterinary Medical Association standards.

## ANIMAL WELFARE

1. The public is often concerned about the welfare of animals. Animal welfare groups, such as the Humane Society of the United States, the American Humane Association, and the American Society for the Prevention of Cruelty to Animals, are genuinely concerned about the treatment of cats. They realize that feral cat populations are a problem, and they support the idea of responsible cat ownership to include good cat care practices and neutering.

2. An animal control program that uses humane methods for catching and handling feral cats is usually supported by the public and animal welfare groups, which otherwise become concerned when inhumane control techniques are used.

3. Recommendations for working with animal welfare groups:

a. Remember that the mission is to reduce feral cat problems on the installation for the health and welfare of installation personnel and their pets as well as for the welfare of feral/stray cats and wildlife.

b. The follow-on mission is to prevent re-establishment of the feral cat problem.

c. Remember also that the feral cat problem is caused by humans. Feral cats exist because of irresponsible cat owners, poor building maintenance, and human failure to do anything about these problems.

d. The method used for cat control needs to be effective and efficient. Live trapping, hand catching and habitat/food source reduction are effective and humane means of reducing cat populations.

e. If the public is concerned about your installation's cat control program, invite a representative group to observe your operation and to suggest improvements. Implement suggestions that make your cat control program better, but always remember (a-d) above. Your result must be effective cat control.



f. In some cases, an animal welfare group may want unclaimed cats. Through coordination with installation veterinary services, animals may be transferred to welfare groups for additional adoption opportunities. The actual transport mechanism will vary with local situations. During an initial feral cat reduction effort, animal welfare groups may help find homes for adoptable cats.

g. Animal welfare groups may also help provide animal care services (neutering, animal care classes) and pet-owner responsibility counseling for prospective cat owners.

h. The installation commander should have the veterinary services provide an animal care program during welcome and in-processing briefings.

## APPENDIX A

### GLOSSARY

**ANIMAL RIGHTS ORGANIZATION** - An organization of people who believe that all animals have rights.

**ANIMAL WELFARE ORGANIZATION** - An organized group of people whose main concern is the humane treatment of all animals. Many are organized on a national level. At the local level, some of these organizations sponsor animal care and adoption facilities.

**BARTONELLOSIS (CAT SCRATCH FEVER)** - A disease of humans caused by the gram-negative bacterium Bartonella henselae. Humans acquire this disease when infected cats scratch, bite or lick them.

**DOMESTIC CAT** - A cat that is cared for by and lives with a human who claims ownership. These cats are considered pets and are usually friendly and approachable by humans. Pet owners should neuter cats not used for specific breeding purposes.

**EUTHANASIA** - From the Greek, means "good death." A proper euthanasia technique results in painless, rapid unconsciousness, followed by cardiac or respiratory arrest, and ultimately death (Figure 5).

**FELINE IMMUNODEFICIENCY VIRUS (FIV)** - A viral disease that compromises the cat's immune system. The cat becomes more susceptible to other illnesses and infections. The cat may show weight loss, loss of appetite, swollen lymph nodes, fever, and sores on the mouth and gums. The disease is spread from cat to cat by close contact. Preventive methods include isolation and testing a "new" cat before bringing it into contact with FIV free cats. There is no FIV vaccine. FIV does not infect humans.

**FELINE DISTEMPER OR PANLEUKOPENIA** - A potentially fatal, viral disease that attacks the cat's intestinal tract and bone marrow. The disease can be transmitted through the air, through close contact with infected cats, or through contact with places where infected cats have been. Symptoms include diarrhea, vomiting, severe dehydration, and fever. Vaccinations to prevent the disease can be given to cats as young as 6 weeks followed by an annual booster.

**FELINE INFECTIOUS PERITONITIS (FIP)** - A fatal viral disease of cats that affects very young and old cats or cats with FeLV. Transmission is usually by cat contact with contaminated urine or feces. Symptoms include a rough hair coat, loss of appetite, fever, or a change in personality. The cat may show no signs of the disease for quite some time or it may suddenly become ill and die. Vaccines are available for prevention but must be started early. Keeping uninfected cats away from other cats is another preventive measure.

**FELINE LEUKEMIA VIRUS (FeLV)** - A fatal viral disease that compromises the cat's immune system and results in the development of various types of cancer and other chronic illnesses. The virus occurs in saliva, urine and other body fluids and is passed from cat to cat through general contact, especially licking, biting or sneezing. FeLV is the leading fatal cat disease.

**FERAL CAT** - A cat without a tag that is living and breeding on its own in an urban or rural environment. These cats are usually descendants of other feral or stray cats. Small feral kittens can usually be converted to pets if removed from the environment at an early age and given adequate care. Feral cats may depend on food from human sources, whether or not such food is deliberately provided. The main distinction between domestic and feral cats is that feral cats do not live with or under the close supervision (protection, health care) of humans. Feral cats are usually not approachable, though some pet cats are equally unapproachable.

**FLEAS** - The cat flea, Ctenocephalides felis, is an external parasite of cats. The adults feed on cat blood and lay eggs that fall off the cat and onto the ground. Many eggs fall off the cat when it is in its resting area. The eggs hatch and a worm-like larva develops. The larva eventually forms a pupa that may lie dormant until conditions are favorable for its emergence as an adult. A change to a higher carbon dioxide concentration is one favorable factor. Fleas are a common vector of feline tapeworms. Flea populations fluctuate, and when flea populations are large, excess fleas seek out other food sources, including humans. Cats living under a building may cause flea populations to increase to the point that they work their way into the building and attack the occupants.

**MITES** - Various types of mites infest cats and cause skin ailments. Ear mites are perhaps the most common. Symptoms include a dark, waxy, odorous substance inside the cat's ears. Ear mites are an irritation to cats, which may react by scratching or periodically shaking their heads.

**NEUTER** - To remove the sex organs from an animal (i.e., the testicles of the male and the ovaries of the female). Spaying is a term for neutering a female.

**RABIES** - Rabies is a lethal viral disease associated with mammals. There is no cure for rabies, but it is preventable. Annual vaccination of pets and continuous elimination of feral animals in urban areas reduces the likelihood of a rabies outbreak. Pre- or post-vaccinations are available for humans who may be exposed to rabid animals. For details on rabies vaccinations, consult your local medical authority.

**RINGWORM** - A disease caused by several types of fungi. Ringworm causes discolored patches of skin and in some cases intense itching. Treatment is with topical antifungal creams but the condition may disappear on its own. Hair follicles infected with ringworm may cause the hair to turn gray, fall out, and leave temporary bald spots. Cats serve as reservoirs of these fungi, and the fungi are transmitted by contact with infected cats or humans.

**SPAY** - To remove the ovaries of a female animal.

STRAY CAT - A cat that normally lives with and is cared for in some manner by a human but has temporarily or permanently wandered away from its home or, because of neglect, associates with feral cats. Stray cats may or may not be friendly, depending on the amount and type of human care they received as kittens. Most strays have been abandoned by their owners.

TOXOPLASMOSIS - Toxoplasmosis is caused by a protozoa, Toxoplasma gondii, which lives in the intestinal tract of cats, where the sexual stage of the life cycle is completed. In most cats and humans the disease is asymptomatic; however, in pregnant women the fetus may be adversely affected. Exposure to Toxoplasma during pregnancy, especially in the second trimester, may result in abortion or premature birth. Surviving infants may show neuropsychic retardation, chorioretinitis, hydrocephalus, microcephalous, epilepsy or deafness.

## APPENDIX B

### List of Animal Control Equipment Suppliers

Disclaimer: Armed Forces Pest Management Board listing of animal control equipment suppliers does not constitute endorsement of these companies, their policies or their products. Other animal control companies or dealers exist and these will be added to future versions of this guide.

We recommend that the purchaser contact several companies, including local farm, ranch and feed stores and sporting goods dealers. New listings of equipment dealers may also be found in pest or animal control magazines or journals. A survey of animal control equipment suppliers will allow the purchaser to select and purchase the appropriate control equipment at the best possible price.

Kness MFG Co Inc., Highway 5 South, P.O. Box 70, Albia, Iowa 52531-0070  
800-247-5062, fax 515-932-2456

Margo Supplies LTD., Site 20, Box 11, R.R. #6, Calgary, Alberta, Canada, T2M 4L5  
403-285-9731, fax 403-280-1252

Tomahawk Live Trap Company, P.O. Box 323, Tomahawk, Wisconsin, 54487  
715-453-3550

Wildlife Management Supplies, 640 Starkweather, Plymouth, Missouri 48170  
313-453-6300, fax 313-453-6395, 800-451-6544

Woodstream (Havahart traps), Lititz, Pennsylvania 17543-0327  
717-626-2125

## Appendix C

